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ABSTRACT

This paper examines the potential influence of school reform policies on the high school dropout rate. We summarize a diverse set of reports on American education which recommend increasing academic standards in schools as a means for improving secondary school performance. We also describe our understanding of the processes by which youngsters drop out of school. In light of these diverse literatures, we show that raising standards may have both positive and negative consequences for potential dropouts. On the positive side, raising standards may encourage greater student effort and time on schoolwork, and thus lead to higher levels of achievement. On the negative side, raising the standards may increase academic stratification within schools and cause more school failure, with no apparent remedies. Because of these potential negative consequences of raising standards, we assess the literature on intervention programs designed to reduce delinquent behavior and school dropout. We suggest that alterable organizational characteristics of schools can help buffer the potentially negative consequences of raising academic standards for students at risk of dropping out. We conclude by calling for rigorous evaluations of the implementation and measurable effects of school reform efforts, in the context of a "full enrollment model" of program effectiveness. (An 18-page bibliography concludes the paper.) (Authors)

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RAISING STANDARDS AND RETAINING STUDENTS: THE IMPACT OF THE REFORM RECOMMENDATIONS ON POTENTIAL DROPOUTS

Edward L. McDill, Gary Natriello, and Aaron M. Pallas

The Johns Hopkins University

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The Center

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The Center works through three research programs to achieve its objectives. The School Organization Program investigates how school and classroom organization affects student learning and other outcomes. Current studies focus on parental involvement, microcomputers, use of time in schools, cooperative learning, and other organizational factors. The Education and Work Program examines the relationship between schooling and students' later-life occupational and educational success. Current projects include studies of the competencies required in the workplace, the sources of training and experience that lead to employment, college students' major field choices, and employment of urban minority youth. The Delinquency and School Environments Program researches the problem of crime, violence, vandalism, and disorder in schools and the role that schools play in delinquency. Ongoing studies address the need to develop a strong theory of delinquent behavior while examining school effects on delinquency and evaluating delinquency prevention programs in and outside of schools.

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This report, prepared by the School Organization Program, examines how recent high school reform policies--especially increased academic standards--may affect high school dropout rates.

ABSTRACT

This paper examines the potential influence of school reform policies on the high school dropout rate. We summarize a diverse set of reports on American education which recommend increasing academic standards in schools as a means for improving secondary school performance. We also describe our understanding of the processes by which youngsters drop out of school. In light of these diverse literatures, we show that raising standards may have both positive and negative consequences for potential dropouts. On the positive side, raising standards may encourage greater student effort and time on schoolwork, and thus lead to higher levels of achievement. On the negative side, raising standards may increase academic stratification within schools and cause more school failure, with no apparent remedies.

Because of these potential negative consequences of raising standards, we assess the literature on intervention programs designed to reduce delinquent behavior and school dropout. We suggest that alterable organizational charactersitics of schools can help buffer the potentially negative consequences of raising academic standards for students at risk of dropping out. We conclude by calling for rigorous evaluations of the implementation and measurable effects of school reform efforts, in the context of a "full enrollment model" of program effectiveness.

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In this paper we confront the controversial issues of quality of education and equality of educational opportunity in America in light of the publication of a large number of reports in the past 18 months which have examined the academic weaknesses of American schools and have proposed major reforms for our educational system. More specifically, we address the task of drawing together a body of research-based information intended to aid in guiding educational reform efforts in the context of recommendations and prescriptions proposed by the various commissions and studies.

We concentrate our efforts on the question of the academic, social, and economic consequences for a population "at risk" -- potential dropouts from secondary schools -- of implementing the various reform commissions' prescriptions for enhancing the quality of education. We focus on the dropout phenomenon because it is widely viewed as a major educational and economic problem (Steinberg, Blinde, and Chan 1984).

Given the magnitude of the dropout problem in terms of personal, social, and economic costs, it is important to investigate the likely consequences for potential dropouts of raising academic standards in accordance with recommendations of the recent reform commissions and studies. Will implementing their prescriptions for academic reform have the unintended consequences of increasing dropout rates and related problems such as school discipline, violence, and vandalism? Our intent is to provide a tentative answer to this question by accomplishing the following tasks:

(1) presenting a systematic review of the empirical evidence on those factors predictive of dropout behavior;

(2) synthesizing and explicating the recommendations of the recent commission reports and studies for increasing academic standards;

(3) integrating information from (1) and (2) to provide an informed perspective on the likely effects, both positive and negative, on the population at risk in the absence of any other change in the structure of schools;

(4) identifying the characteristics of schools which can be altered to minimize the likely adverse effects on potential dropouts of changes in academic standards;

(5) specifying an educational research and development agenda derived from tasks 1-4 to combat the dropout problem.

Although the reports of the reform commissions have been generally acclaimed by both the lay public and educators, there is concern from several sources about their alleged failure to give balanced emphasis to the ideas of quality and equality of education, precepts which have alternated in dominating the attention of policy makers and educators in the past two decades (Astin, 1982; Coleman, 1981; Finn, 1983; Gardner, 1961). This concern, especially as it relates to the reports' recommendations for educational improvement, has led to criticism by a number of respected policy analysts and researchers that the commissions were insensitive to issues of educational equity.

Of particular concern to these critics is the reports' overall lack of attention to the dropout problem in secondary schools as both an equity and an excellence problem. For example, Howe (1984) accords neglect of the dropout problem top priority among a list of ten major criticisms he presents of the recommendations made by the various reform commissions. Moreover, the very recommendations made by the various commissions may exacerbate the unnoted dropout problem (Edson, 1983). Clearly, the ideas of excellence and equity have

been joined by the critics of the reform reports and studies. Their strong concern with the lack of attention to dropping out as an equity issue, in conjunction with the magnitude of the problem and its consequences, emphasize the need for a systematic examination of the phenomenon.

Understanding the Dropout Problem

Recent evidence suggests that the failure of many students to complete high school is a serious social problem. Neill (1979) reports on a survey of school administrators that revealed that nearly one-third of the respondents cited early dropouts as a problem in their school districts. This problem is even more widespread in larger districts; over one-half of school administrators in districts with more than 25,000 students report that early dropouts are a problem. These same administrators most frequently cited the permanent intellectual and/or vocational damage to students and the overall lowering of school standards and achievement as negative consequences of the high dropout rates. The implications of the dropout problem extend beyond the schools and beyond the individual students involved. A task force of the New York State Senate attributed the decline in New York City's economy in part to high dropout rates, particularly among black youth. The economic costs of the dropout problem are difficult to estimate, but Levin (1972) projected the costs for lost tax revenues from high school dropouts ages 25-34 at $71 billion, welfare and unemployment costs at $3 billion, and crime and crime prevention costs at $3 billion.

As both Meyer, Chase-Dunn, and Inverarity (1971) and Neill (1979) note, reliable statistics on school attendance are difficult to obtain. Nevertheless, it is estimated that approximately 25% of all 18 year olds have not graduated

from high school (Dearman and Plisko, 1979). Although different sources present different figures, this rate has remained fairly stable over the last decade. The vast majority of youngsters who drop out do so after they have entered the ninth grade.

To anticipate the potential effects of implementing the reform commissions' recommendations on the dropout problem it is important to understand not only the magnitude of the problem, but also the causal factors associated with it. There are a variety of reasons why American youth drop out of high school. These reasons often are interrelated, and there is considerable overlap. Nevertheless, it is possible to group them into three major categories: those related to student experiences in school, those related to conditions of the student's family, and those related to economic factors (Kaplan and Luck, 1977). We consider each of these in turn.

By far the most common reason for leaving high school is poor academic performance. Poor academic performance refers primarily to poor grades, although low academic ability also has been implicated. It is not surprising that students who are not doing well in school should seek to leave an environment providing negative feedback. In surveys of students who dropped out of school, poor performance is often accompanied by expressed reasons for leaving such as "I disliked school" or "School was not for me" (Peng, Takai and Fetters, 1983; Rumberger, 1983). Expulsion or suspension from school are additional indicators of problems students experience in school that lead to the failure to complete high school. Hence, ee include truancy and in-school delinquency in our list of school-related behaviors associated with dropping out.

A second set of factors associated with failure to complete high school concerns family conditions. Teenage pregnancy is one such condition. There has

been much concern about the plight of the teenage mother, and much research documents the educational obstacles faced by adolescent mothers (Furstenberg, 1976). For these students, keeping up with school becomes imposible.

Many students who drop out also report marriage or marital plans as the reasons. These family obligations are more salient for females than males. Although many of the students who marry or bear children do drop out, it is important to remember that these events are fairly rare. Only a very small fraction of high school-aged youth marry.

Conditions of the student's family of origin also contribute to the dropout problem. For example, some studies have shown that students from broken homes are twice as likely to drop out of school as are students living with both parents (Neill, 1979).

Economic issues constitute a third broad category of factors associated with dropping out of school. Many students report leaving high school to go to work (Peng, et al., 1983; Rumberger, 1983), which could involve supporting the family of origin or the youth's own family. In either event, a disadvantaged family background increases the probability of dropping out. These economic reasons are reported both by males and by females, but more frequently among the former.

Recent evidence suggests that teenage employment is more widespread than was previously imagined. Michael and Tuma (1983) found that 25% of all 14-year olds in 1979 were employed at least part-time. The rate of employment increases steadily with age, so that slightly more than 50% of 17-year olds were employed in 1979. The intensity of this work involvement also is quite high. D'Amico (1984) shows that, among 12th graders, those who work average 15 to 18 hours of work per week. His research suggests that a very intensive work involvement is associated with higher rates of dropping out for at least some groups of youth.

In considering the impact of the recent reform recommendations on our population at risk, we must be sensitive to the factors which typically have led students to leave school prior to high school graduation. Raising standards for student performance may interact with these factors both to diminish or enhance their impact. Before considering such interactions we review the specific recommendations of the various reform commissions for raising standards for student performance.

Classifying the Standards in the Commission Reports

The recent commission reports on the state of American public schools have called for higher standards (Education Commission of the States, 1983; Griesemer and Butler, 1983) which fall into three broad areas: course content, the use of time, and student achievement. These three quite different types of standards may present different problems for potential dropouts.

Several reports call for changes in the content of courses that would result in higher standards. For example, the National Commission on Excellence (1983) advocates five new basics to be taken by all high school students. These basics include four years of English, three years each of mathematics, science, and social studies, and one-half year of computer science. Since many students do not now take this type of course sequence, the commission's proposal would represent a more demanding curriculum for these students. Other reports have advocated more courses in science and math (National Science Board Commission, 1983) or the elimination of the soft, non-essential courses (Task Force on Education for Economic Growth, 1983), but the general message is the same: students should be pursuing more demanding sequences of basic courses. Moreover, if these recommendations are implemented, students will have fewer choices in selecting

courses, and the high school curriculum will have a more restricted range of course offerings.

Other recommendations regarding curriculum content have gone beyond the simple designation of basic courses in specific areas. For example, Goodlad (1983) advocates more attention to higher order skills such as discussion, writing, and problem solving in all areas of the curriculum to correct the present over-emphasis on lower level skills such as the memorization of facts. Boyer (1983) also stresses the importance of higher order skills, particularly writing.

A second area in which a number of commission reports have advocated higher standards is in the use of time for instruction and learning. The National Commission on Excellence (1983) and the Task Force on Education for Economic Growth (1983) recommend that more time be spent in school through the introduction of longer school days and longer school years. They are joined in this recommendation by the National Science Board Commission (1983) which, in addition to longer school days and school years, offers the possibility of a longer school week in order to accommodate the greater time necessary for increased attention to science and mathematics.

Out-of-school learning time is the subject of several reports. The National Commission on Excellence (1983) argues that students should be assigned more homework in high school. The Task Force on Education for Economic Growth (1983) recommends firm, explicit, and demanding requirements for homework.

Stricter attendance policies are also offered as a way to increase the time students spend in school. The National Commission on Excellence in Education (1983) recommends that such attendance policies carry clear incentives and sanctions. The Task Force on Education for Economic Growth (1983) advocates firm and explicit attendance requirements.

Finally, several reports point out that in-school time should be used more effectively. Goodlad (1983) argues that before adding additional time to the school calendar, the current time should be used well. Both the National Commission on Excellence (1983) and the Task Force on Education for Economic Growth (1983) argue for better use of time in school. Presumably, stricter discipline policies would contribute to the better use of school time (Task Force on Education for Economic Growth, 1983).

A third area in which one or more commission reports has advocated higher standards is student achievement. Such calls for achievement standards take a variety of forms. One form concerns the use of grades solely as indicators of academic achievement (National Commission on Excellence, 1983; Task Force on Education for Economic Growth, 1983). This recommendation is a call for the end to the use of grades as motivational devices reflective of student effort. A second form of achievement standard involves the use of rigorous grade promotion policies. Students would be promoted only when it is academically justified, not for social reasons (National Commission on Excellence, 1983; National Science Board Commission, 1983; Task Force on Education for Economic Growth, 1983). A final form of achievement standard entails the use of standardized tests at specified intervals. Boyer (1983) argues for the use of a test of language proficiency prior to high school admission, with remediation of any deficiencies during the summer. The National Commission on Excellence (1983) recommends the use of achievement tests at major transition points, particularly in the move from high school to college. It also advocates that colleges and universities raise admissions standards by setting achievement levels for student course work. The Task Force on Education for Economic Growth (1983) recommends periodic testing of achievement and skills.

The Potential Positive Impact of Raising Standards

The positive consequences of raising standards for students in American schools can derive only from the greater effort and attention that students might devote to school work in order to achieve at levels higher than those previously demanded. Thus a key question for educational research in this area is the relationship between the demands placed upon students and the effort students devote to school tasks. Will students respond to higher standards by putting forth greater effort? More specifically, will the commission recommendations for a more standard core curriculum, additional time on school work, and higher achievement standards result in greater student effort and higher student achievement?

The best evidence for the potential positive impact of the proposed curriculum reforms comes from a series of stuies by Alexander and associates (Alexander and McDill, 1976; Alexander, Cook, and McDill, 1978; Alexander and Cook, 1982; Alexander and Pallas, 1984). These studies examined the effects of high school curriculum on several important measures, including standardized test performance, goals for the future, and the likelihood of attending college. The overall conclusion of these studies is that enrollment in the academic track contributed little to student outcomes.

Alexander and Pallas (1984), however, note the need for an examination of curriculum effects that is more precise than simply analyzing the consequences of school track. They present an analysis based closely on the type of curricular recommendations contained in the report of the National Commission on Excellence (1983). Using data from the Educational Testing Service's Study of Academic Prediction and Growth (Hilton, 1971), they assess the impact of the "New Basics" recommended by the National Commission on student performance on the SAT and on

English and history achievement tests. They demonstrate that completion of all the New Basics curriculum has sizeable positive effects on seniors' test performance, even with relevant characteristics of students statistically controlled.

While the overall advantages of the kind of core requirements suggested in the recent reports are clear, Alexander and Pallas (1984) also show that when students have relatively low GPA's, completion of the core requirements seems to have little effect on student test performance. It is somewhat disheartening that completion of the kind of core curriculum recommended by the recent commission reports appears to do little to improve the performance of students with low GPA's, the very students most likely to be potential dropouts.

Evidence in support of the positive effects of more demanding time requirements on student effort and achievement comes from research on student time. Studies in this tradition typically have examined the effect of the time students are engaged in learning on actual achievement. In reviewing these studies, Karweit (1984) concludes that while these studies tend to show positive associations between time and learning, all of the studies have problems with inconsistent and weak findings and are based primarily on samples of elementary students of average ability. In short, while the studies of student time on task offer some hope that greater student effort will lead to greater achievement, this may not be the case for all students under all circumstances.

At the secondary school level the question of the impact of increased time requirements on student achievement has been examined through a series of studies of the relationship of time spent on homework on achievement. Coleman, Hoffer, and Kilgore (1982, p. 171) found that differences in the time spent on homework by high school students accounted for a small but consistent part of the

differences in achievement test scores between public and private sector schools. Keith (1982) showed that the amount of time students spent on homework contributed significantly and positively to their grades. Paschal, Weinstein, and Walberg (1983), in a summary of 15 empirical studies which examined the relationship of time spent on homework to learning, concluded that homework had a modest, positive effect on learning.

Student effort on homework seems to have a positive impact on achievement for students of all ability levels. Keith (1982) demonstrated the compensatory effects of time spent on homework by showing low ability students who do 1 to 3 hours of homework per week achieve grades commensurate with those of students of average ability who do no homework. Natriello and McDill (1984) found that homework was positively associated with grade point average. Thus when homework is used as an indicator of student effort, such effort appears to have modest but consistent positive effects on student achievement.

The impact of achievement standards on student effort and achievement has also been the subject of systematic inquiries. At the elementary school level this question is addressed, at least indirectly, by research which examines the impact of teacher expectations on students. Brophy and Evertson (1981) review this research and note that the initial work of Rosenthal and Jacobson (1968) on the self-fulfilling prophecy in classrooms generated a great deal of interest in examining the effects of differences in teacher expectations on student behavior and performance in the classroom. Studies that examined teacher behavior in classrooms, such as those by Beez (1968), Kester and Letchworth (1972), and Brophy and Good (1970), showed that teachers did display behavior representing different levels of standards for different students. In general, the studies of teacher expectations that examined actual teacher behavior seemed to indicate

that when teachers had higher expectations for students, and thus were more demanding of them, students responded with greater effort. We interpret this literature as providing support for the proposition that higher standards can lead to somewhat greater student effort and achievement under restricted conditions, although at present these conditions are not understood in a systematic way.

At the secondary school level an answer to the question of the impact of achievement standards on student effort may be found in a series of studies of the evaluation of students by Natriello and Dornbusch (1984). These studies examined the standards of high school teachers and the responses of students to those standards, and found that in many cases the standards teachers had for student performance were quite low. Certain groups of students, most notably blacks and Hispanics, were especially likely to experience low standards for their school performance. Moreover, the studies found that students who were not receiving challenging standards often rated themselves as working hard on school tasks even though their own objective descriptions of the effort they were devoting to school work revealed them to be exerting minimal effort. These same students were very likely to have poor grades and low achievement scores. Natriello and Dornbusch concluded that these students did not fully appreciate the degree of effort required to learn in high school because they had not been presented with challenging standards.

But what happens when students are confronted with challenging standards of the sort advocated by the recent commission reports? In this same survey study of high school students, those who were presented with challenging performance standards did, in general, devote more effort to school tasks. In a subsequent study reported by Natriello and Dornbusch (1984) these same relationships were

examined through observations of 38 classrooms. When these classrooms were classified as high-demand, medium-demand, and low-demand, Natriello and Dornbusch found that the higher the demand level in the classroom, the more likely students were to report paying attention in class and spending time on homework. Paradoxically, it was in the low demand classrooms that student cutting was the highest. Thus standards for student performance that are somewhat higher than the extremely low standards observed in the low-demand classrooms seem both to foster student effort and to discourage absenteeism.

But how will low-achieving students respond to more demanding standards? Natriello and Dornbusch (1984) found that a higher demand level in the classroom was associated with greater effort by students, even when the ability level of the students was statistically controlled. In addition, it was in the low-demand classrooms that they found the highest proportion of students reporting that they felt that the teacher should make them work harder. However, they also found that high-demand classrooms can often lose low-ability students. When the pace was too fast for them, low-ability students reported themselves trying less hard in high-demand classrooms than in medium-demand classrooms. Natriello and Dornbusch conclude that low ability students must be provided with additional help as they attempt to meet more demanding standards.

In conclusion, several different lines of research at both the elementary level and the secondary level give some hope that raising standards will lead students to work somewhat harder, at least when standards are originally quite low, and that greater student effort will lead to somewhat greater student achievement. However, it is not clear that these relationships will hold for all students under all conditions. Certainly, the provision of additional assistance for students experiencing learning difficulties appears to be a key

factor in the success of any attempt to raise standards. A variety of factors characteristic of potential dropouts may complicate the picture and may lead to unintended negative consequences from higher standards. It is to a discussion of these potential negative effects that we now turn.

The Potential Negative Effects of Raising Standards

In reviewing the recommendations for higher standards presented in the various commission reports we noted three categories of standards, those involving more rigorous content, those involving greater time from students, and those involving demands for higher levels of achievement. Our analysis of the potential negative effects of raising standards leads us to evidence which suggests that each of these types of standards may result in negative consequences for some students. More specifically, we consider the possibilities that 1) the recommendations for a restricted core of curriculum requirements may lead to greater academic stratification and less student choice in schools, 2) the recommendation that schools demand more student time may lead to more conflicts between the demands of schools and other demands placed upon students, and 3) the recommendation to raise required levels of achievement may lead to more student experience with failure without apparent remedies.

The curriculum reform recommended in the commission reports typically involves a move toward a uniform set of core courses to be taken by all students. We have already noted the failure to find a positive effect of such a curricular pattern on students with low GPA's, those most likely to be potential dropouts. That finding had to do with the substance of the "New Basics" that comprise the curricular recommendations. But we may also consider the suggested form of the curriculum, a single pattern of courses to be taken by all students. Resarch at

the elementary school level leads us to anticipate some negative consequences of this reform for our population at risk.

A series of studies on students' perception of ability in classrooms (Rosenholtz and Wilson, 1980; Simpson, 1981; Rosenholtz and Rosenholtz, 1981) suggests that a narrow range of curricular offerings may lead to particularly negative consequences for potential dropouts. These studies examined the impact of "unidimensional" instructional structures on student ability conceptions and found that when instruction was organized so that all students worked on similar tasks and students had little choice among alternative tasks, students were more likely to agree generally on ratings of ability in the group. In contrast, in classrooms in which there was a "multidimensional" structure, students were less likely to conceive of ability as a single dimension, with some students having generally high ability and others having generally low ability. Rosenholtz and Rosenholtz (1981) conclude that this unidimensional classroom structure entails lower teacher and peer evaluations for lower ability students, lower self-evaluations, and ultimately lower performance.

While it is not clear to what extent these findings regarding ability conceptions in the classroom will operate in the wider context of the school, this perspective does alert us to certain potential negative effects of moving toward a uniform core curriculum. The courses proposed for inclusion in the core curriculum are typically academic courses, all of which tap ability along a narrow range. Implementation of the core curriculum will likely restrict the variation of school experiences for students, limit the number of dimensions of ability deemed legitimate within the school, and curtail student choice in constructing a program of study. Students with limited ability along this one dimension may have to face repeated failure with little opportunity to engage in

other activities that might afford them some success. Thus a major result of the full implementation of the "New Basics" could be the clarification of the distribution of ability in these basics, leaving some students only the choice of dealing with constant failure or dropping out of school.

An additional concern is the impact of increasing time demands on potential dropouts. Schools can demand more time of students in two major ways: first, by lengthening the school day, and second, by assigning more homework, which raises the time required of students out of the school setting. The major concern is that because time is a fixed commodity these increasing time demands might create conflicts between time needed for school commitments and time needed for commitments to families and jobs.

The mechanism by which working is thought to interfere with schooling is not complicated. Time spent working is time taken away from studying, both in school and out (D'Amico, 1984). The little available evidence tends generally to support this line of reasoning. Steinberg, Greenberger, Garduque, and McAuliffe (1982) found that first-time high school workers spent less time on homework than nonworkers, while skipping school more often, and receiving lower grades. D'Amico (1984) also found that extensive levels of work involvement resulted in lessened study time and free time at school. In fact, for some race/sex groups, high levels of work involvement had direct effects on dropping out, a finding corroborated by Pallas (1984).

Greenberger (1983) and D'Amico (1984) suggest that, for high school students, moderate levels of work involvement may have beneficial effects on youngsters, by educating them about work and instilling desirable work habits, but high levels of work involvement may be much more disruptive. The difference is due to the differing levels of time invested in working which is taken away

from school time. If the amount of time required for school work is increased, even modest amounts of working may have negative consequences for educational performance and persistence. A great deal would depend on how youngsters' propensity to work might respond to increased time demands. Youngsters who are working to help support their families, for instance, are unlikely to stop in response to increased school demands. Unfortunately, we know rather little about the determinants of adolescent work behavior.

Increasing the time spent in school alo creates conflicts with extracurricular activities, again due to the fixed resource of time. Participation in extracurricular activities has been shown to have a variety of desirable effects on academic progress, by raising educational expectations and grades (Spreitzer and Pugh, 1973), lowering delinquency (Landers and Landers, 1978), and directly affecting persistence in school (Otto and Alwin, 1977). Participation in extracurricular activities builds a normative attachment to the school, and also provides an avenue for success for students who do not perform well in the classroom. It is precisely those students who are most at risk of dropping out. Cutbacks in extracurricular activities due to increased school time may deprive the school of the only holding power it has for those high risk students.

A third area of concern is the impact of raising achievement standards on potential dropouts. When compared with high school graduates, dropouts are lower in socioeconomic background, academic aptitude and reading skills, and they have higher rates of absenteeism, truancy, and poorer personal-social adjustments as manifested by aggressive behavior, impulsiveness, early drinking, illicit drug use, and delinquency (Neill, 1979; Quay and Allen, 1982; Robins and Ratcliff, 1980). The profile of the dropout which emerges from numerous studies is that

his/her withdrawal from school is a response to goal failure experienced primarily in the academic and social context of the school (Elliott, 1978; Gold and Mann, 1984). Spady (1974) pointed to problems in the system for evaluating performance which condemn certain students (i.e., the very students in our population at risk) to inevitable failure. Natriello, (1982, 1984) demonstrated how student perceptions of school performance standards as unattainable led to various forms of student disengagement from high school, including apathy, participation in negative activities, and absenteeism, all precursors of dropping out. McPartland and McDill (1977) linked the nonresponsiveness of the school to students to the same types of problems.

Consideration of a recent type of education reform similar to those of the 1983-84 reform commissions -- minimum competency testing (MCT) -- should also provide some useful information on the potentially adverse effects of tightening academic performance standards on at risk students. As school systems have continued to be criticized for "social promotion" of students in the past two decades, they more recently have come to rely heavily on competency testing in their efforts to increase academic standards (Labaree, 1984). One of the primary areas of controversy over MCT involves equity for socially and economically disadvantaged students, minority students, and at risk students such as potential dropouts. For example, concerning racial and social class inequities, both Jaeger (1982, p. 241) and Linn, Madaus, and Pedulla (1982, pp. 15-19) show that black students fail the tsts in substantially higher proportions than do whites, and the latter authors conclude that "At this point in our history minimum competency testing requirements clearly have an adverse disproportionate impact on black students" (p. 17).

Concerning the effects of MCT on at risk students, Neill (1979, p. 32) voices what appears to be a frequent concern in the education community:

> Because minimum competency standards are so new, it is not known if they will result in a rise in the number of students enrolled below modal grade level or a rise in the number of students who drop out because they fail topass minimum competency tests. Both of these predictions have been heard.

In our search for empirical evidence concerning the effects of MCT on at risk students we are unable to locate any systematic evaluative studies. Although specific evidence on the adverse effects of MCT on likely school leavers is unavailable, the results showing that failure rates on competency tests are much higher for economically disadvantaged students and those from minority racial/ethnic backgrounds seems relevant to the problem given the fact that these two sociodemographic groups have disproportionately high rates of truancy, dropping out, and school discipline problems.

If academic standards are raised and students are not provided substantial additional help to attain them, it seems plausible to expect that social and academically disadvantaged students will be more likely to experience frustration and failure resulting in notable increases in absenteeism, truancy, school-related behavior problems, and dropping out which have been accurately characterized as "links in a long chain of interconnected problems" (Kaplan and Luck, 1977, p. 41).

Reducing the Adverse Effects of School Reform on Students at Risk

One of the significant trends in educational research and development in the past fifteen years has been the search for alterable (Bloom, 1980) or manipulable (Epstein, 1983) variables of schools and their members which are modifiable

through direct intervention by the participants themselves, by administrators, or by researchers. This reorientation of educational reearch is useful for identifying school and individual characteristics subject to change in order to cushion the adverse effects of proposed educational reform on the population of students at risk. It is to this body of literature that we now turn for suggestions.

The segment of the literature most relevant to our concerns has to do with studies of deviant behavior such as school discipline problems and disorder (e.g., victimization of students and teachers and vandalism), absenteeism, truancy, and dropping out. One of the exemplary research and development efforts in this area, conducted in both junior and senior high schools, is by Gottfredson and colleagues (G. D. Gottfredson, 1983, 1984; G. D. Gottfredson and D. C. Gottfredson, 1984, in press; D. C. Gottfredson, 1983, 1984; Wiatrowski, Gottfredson, and Roberts, 1983) over the past five years. Not surprisingly, they find that schools with high dropout and truancy rates also have high rates of student disorder and discipline problems. These schools can be summarily classified in terms of two dimensions. The first has been labelled urban social disorganization which describes the schools as being concentrated in large cities, being large in size, having a "...high proportion of minority students; measured by such community characteristics as high unemployment, high crime, much poverty and unemployment, and many female-headed households..." (G. D. Gottfredson, 1984, p. 74).

The second significnt dimension or cluster of characteristics of such schools has to do with the lack of soundness of the schools' administration and is defined as the school having poor teacher-administration cooperation, teachers emphasizing the maintenance of control in classes rather than instructional

objectives, teachers employing ambiguous sanctions (e.g. lowering grades as a disciplinary practice or ignoring the misbehavior), perceptions by students that rules are not clear or fair, and students not believing in conventional social rules.

It should be noted that these results on student body characteristics and behaviors are highly consistent with (1) the profile of the dropout based on individual-level analyses described earlier, (2) related research on delinquency, school disorders, and truancy (e.g., Polk and Schafer, 1972; Spivack and Swift, 1973; McPartland and McDill, 1977), and (3) the literature on alternative schools as a potentially useful educational innovation to combat school disorders, truancy, and related deviant behaviors (e.g., Neill, 1979; Foley, 1983; U. S. Department of Justice, 1980, Appendix 3).

Of all the alterable characteristics of schools discussed in these different streams of literature, size of school is the one most emphasized. Researchers and practitioners are practically unanimous in asserting its importance. This is not surprising given the fact that size is conceptualized as a basic structural feature of social groups (Morgan and Alwin, 1980), and has been viewed "as the most important condition affecting the structure of organizations" (Blau and Shoenherr, 1971, p. 57). Small schools of 300-400 students (Levin, 1983) with a low student-adult ratio are viewed as having fewer disorders (Diprete, 1982; G. D. Gottfredson, 1984; McPartland and McDill, 1977; U. S. Department of Justice, 1980, Appendix 3), higher achievement levels (Levin, 1983), higher rates of student participation in extra-curricular activities (Barker and Gump, 1964; Morgan and Alwin, 1980), and stronger feelings of satisfaction with school life (Barker and Gump, 1964). Most analysts interpret these relationships in terms of differences in interactive characteristics between small and large schools, with

the former being more manageable (Duke and Seidman, 1981, p. 8). Specifically, small schools are more personalized or less anonymous, have a more homogeneous student body, have more flexible schedules, and have smaller classes. In fact, low student-adult ratios are important in making feasible other manipulable characteristics of schools believed to be useful in counteracting deviant behavior.

A second alterable characteristic of the school, closely linked to size, is the structure and content of the curriculum. Specifically, an individualized curriculum and instructional approach are crucial because psychologically disengaged students such as potential dropouts have substantial deficits in aptitude and achievement. Individualized learning approaches with course content and mode and pace of presentation tailored to the individual student's aptitude and interests (to the extent possible) are of major importance in order to prevent the sense of academic failure and low self-esteem characteristic of school delinquents, truants, and dropouts, feelings that will be even more pronounced as standards are raised (U. S. Department of Justice, 1980, Appendix 3). Some dropout and delinquency programs have shown that self-designed and self-paced curricula which integrate vocational and academic subjects with work experience are promising because they enable the disaffected student to acquire salable skills and to perceive that his/her schooling is relevant to the workplace (Lotto, 1982).

A third modifiable feature of schools which appears to be useful in combating deviance may be labelled broadly as climate, especially that component of school environment which relates to governance (G. D. Gottfredson, 1984). Climate encompasses a large number of potentially manipulable factors such as reward systems, clarity and consistency of rules and expectations governing

social behavior, and degree of normative pressure in the school environment toward educational goals such as high achievement and intellectualism.

The concept which perhaps appears most frequently in the relevant literature on climate is governance. Several researchers have emphasized the importance of clear rules and their consistent enforcement as essential to maintaining an orderly environment, which, in turn, is crucial to high academic achievement (Coleman, Hoffer, and Kilgore, 1981). G. D. Gottfredson (1984, p. 76) states the consensus on this point succinctly: "The clearer and more explicit the school's rules, and the more firmly and fairly they are enforced, the less disorder that the school experiences."

Another alterable component of school climate is the system of academic rewards. Learning models applied to student achievement and social behavior typically involve the implicit or explicit premise that in order to generate students' commitment to the school and to motivate them to achieve, the system of rewards must be attainable and contingent on their effort and proficiency. Since potential dropouts and students with behavior problems or more serious conduct disorders have typically obtained poor academic grades, they likely discount the validity or legitimacy of traditional academic evaluation systems. Thus, researchers and practitioners working with such students have found it useful to employ a variety of alternative, detailed reward systems such as (1) learning contracts which specify both effort and proficiency requirements, (2) token economies, and (3) grading systems which base evaluation on individual effort and progress.

The final modifiable component of school climate which we note here is the degree of environmental emphasis on academic excellence by students, teachers, and administrators. Stated differently, at both the institutional and

classroom levels schools vary in the extent to which their student bodies and faculties provide support for achievement and intellectualism, and such variation has been found to be related systematically to levels of student achievement and motivation (Alexander, Fennessey, McDill, and D'Amico, 1979; McDill and Rigsby, 1973).

In summary, the research and perspectives we have presented here suggest that at risk students are likely to be adversely influenced by raising academic standards in accordance with recommendations of the various reform commissions. However, these deleterious effects can be counteracted or lessened by changing school organizational charateristics shown to be related to the affective and cognitive development of students at risk. Under certain conditions the higher standards suggested by the reform commissions would seem to promise improved learning outcomes for all students. However, these conditions are not well understood by either researchers or practitioners. A greater understanding can emerge only from practical policy experimentation coupled with systematic analysis of the results which take explicit account of the effects of policy reforms on students at risk.

Strategies of School Reform to Aid Students at Risk

As mentioned above, a number of the alterable organizational characteristics of secondary schools which show promise in aiding at risk students have emerged from research in the past decade on alternative education programs. Much of the impetus for instituting a variety of schooling options came from widespread concern about discipline problems and victimization in American secondary schools. Alternative education programs or schools are the most visible manifestation of this movement to varied learning options. Alternative programs

are not restricted to students with behavior problems and/or academic deficiencies; they also exist for high achieving and even gifted students (Gold and Mann, 1984, p. 4; Johnson, 1982, p. 317; Robins, Mills, and Clark, 1981, p. 487). They exist for a variety of students who do not respond well to the academic program and social environment of the traditional school. However, our review of the literature suggests that alternative schools are more likely to be populated by at risk or problem students than any other types.

Despite the lack of agreement about the efficacy of alternative schools (Deal and Nolan, 1978), the relevant literature constitutes one of the most important sources of information on how to educate at risk students, especially ideas on alterable characteristics of schools, whether they be traditional or alternative. From our review of this literature we have selected one of the major efforts at designing, implementing, and systematically evaluating a large-scale alternative schools program at the secondary level which clearly reveals the relevance of modifiable characteristics of school organization to at risk students. The program we review is the Alternative Education Program (AP), which is sponsored by the Office of Juvenile Justice and Delinquency Prevention (OJJDP) of the U.S. Department of Justice (1980). Gottfredson and colleagues (G. D. Gottfredson, 1983, in press; D. C. Gottfredson, 1984a, 1984b; G. D. Gottfredson, D. E. Rickert, Jr., D. C. Gottfredson and N. Advani, in press) have responsibility for the national evaluation of this ambitious effort, which is a demonstration program designed primarily to "develop transferable knowledge about approaches to reducing youth crime and victimization in schools" (G. D. Gottfredson, 1983, p. 6) in seventeen sites scattered throughout the continental U.S., Puerto Rico, and the Virgin Islands. Secondary goals of the program include a reduction in suspensions and dropouts, increased attendance, and increased academic performance.

Of the various sites Gottfredson and colleagues have evaluated, Project PATHE in Charleston, South Carolina, which operated in seven secondary schools between 1980 and 1983, provides a prototypical example of an alternative education program which has considerable potential in preventing school delinquency by enhancing student self-esteem, attachment to school, and participation in school activities. PATHE was designed to permit a comparison of the relative efficacy of two approaches, organizational change and individual treatment, in reducing school disruption and related deviant behaviors while simultaneously enhancing academic, affective, and career outcomes (D.C. Gottfredson, 1984a, and 1984b).

Because a true experimental design was employed, the evaluation team was able to assess accurately the separate effects of the organizational change component and the individual treatment method. PATHE involved altering the school management and governance procedures at the school level while simultaneously providing intensive teatment to a target sample of students identified as being in special need of academic and affective assistance. The organizational change approach attempted to establish and maintain a structure "to facilitate shared decision making among community agencies, students, teachers, school administrators, and parents in the management of its schools" (D. C. Gottfredson, 1984a, p. 3). The individual treatment component of the project designed, implemented, and monitored an intensive program of academic and counseling services for students having low achievement, poor attendance records, and discipline problems.

Evaluation of outcomes in PATHE revealed that the organizational change component of the project was more effective in achieving its goals than was the

component which delivered direct services to individual students. The former component showed considerable promise in that the results "revealed persuasive evidence that the program succeeded at decreasing school disruption" (D. C. Gottfredson, 1984b, p. 10). On the other hand, the direct service component to individual students appeared to be ineffective with older students and only marginally effective with younger students. These age differences are likely accounted for by the finding that the direct services were more intensively implemented in the middle schools than in the high schools, suggesting that the individual treatment approach "has potential" (D. C. Gottfredson, 1984b, p. 11).

Some programs utilizing an individual-level treatment modality in school settings for different types of more serious behavior disorders such as "emotionally disturbed" or "serious delinquents" have also shown promising results. As noted by Quay and Allen (1982, p. 1961), students suffering from these types of disorders "have, among their other behavioral characeristics, most of the characteristics of dropouts." In an informative overview of this research, Quay (1978) argues persuasively that the many forms of such behavior problems can be reduced to four basic constellations or types: Conduct Disorder, Personality Disorder, Inadequacy - Immaturity, and Socialized Delinquency. After reviewing the antecedents of these four types he discusses a variety of treatments and concludes that in recent years "there has accumulated an impressive body of knowledge indicating that the systematic use of techniques of behavior modification in the school setting can drastically reduce deviant behavior, while at the same time increasing the acquisition of prosocial behavior and academic skills in all four subgroups" (Quay, 1978, p. 13).

There are numerous psychologically oriented approaches other than behavior modification for treating the types of "acting-out" emotional disturbances in

school described by Quay, as well as other types of emotional disorders such as school phobia (Berg, 1980; Lewis, 1980). Since these approaches are so diverse and typically have not been evaluated systematically, Gold's (1980, p. 518) conclusion seems valid: "Nevertheless, we know very little about what really works, and we suspect, from what careful research has been done, that very few methods have worked at all."

An Agenda for Educational Research and Practice

The commissions and study groups have presented their agendas for educational reform. We have suggested that the reforms directed toward more challenging content, time, and achievement standards may have both positive and negative effects. Further, we are convinced that these positive and negative effects are not likely to fall evenly on all students; some students will profit from the more challenging standards while others may suffer under them. In particular, students who are potential dropouts may suffer greatly under the new standards unless appropriate measures are taken to provide these students with additional learning resources to meet the new challenges they will confront. While some students will find that the new core curriculum, increased demands on their time, and the higher achievement levels required of them enhance their motivation and performance, others will suffer from being at the bottom of a more pronounced stratification system, from being forced to choose between devoting more time to school work or to their other serious responsibilities, and from being placed in a position where standards are correctly perceived as unattainable.

The dilemma for educational policy makers and practitioners will be to devise ways to direct additional learning resources effectively and efficiently

to those students who need them. Our review of alterable characteristics of schools that seem to be associated with successful learning experiences for students at risk suggests a variety of organizational conditions that probably condition the extent to which the needs of students at risk can be identified and learning resources targeted to meet those needs. These are some of the options open to educational practitioners as they confront the educational reforms that are resulting from the studies and reports. Yet, the commissions and study groups are often silent on the issue of providing additional support to students being challenged by the new standards. Unless the means of delivering such support are devised and implemented, the reforms may produce either of two quite unsatisfactory results: an improvement in aggregate measures of student performance chiefly attributable to the increasing selectivity of American schools (i.e., an increase in the dropout rate), or a relaxation of the standards as they are implemented by educators who must confront first-hand the negative consequences of such reforms, a pattern emerging in discussions of the effects of the MCT movement (Eckland, 1980, p. 134).

The challenge for educational practitioners and researchers lies not in raising standards, for that has been done and is being done for them in the majority of states (Walton, 1983). Rather, the challenge lies in implementing these new reforms, delivering educational resources to students, and monitoring the impact of these more challenging standards and enhanced resources. Moreover, the state of present knowledge on these issues suggests that much experimentation is in order. Despite the tone of some of the recent reports, it is not clear how to raise standards for uniformly good effect.

As we noted earlier, most educational interventions are not evaluated at all, and those which are typically are not evaluated properly. Program

evaluation is expensive, yet it is essential to judging the efficacy of changing standards for performance. We believe it imperative that federal funding for education include sufficient resources both for the evaluation of the consequences of changing standards for performance and for more basic research on the effects of school organization on educational outcomes. Federal oversight of program evaluation is the most efficient way of assuring proper dissemination of information regarding effective programs.

While we cannot anticipate the needs for monitoring the great variety of educational reforms and implementations, we can present one fairly straightforward general model for evaluating the outcomes of these reforms that explicitly responds to both excellence and equity concerns. We refer to this approach as the "full enrollment model" of assessing educational outcomes.

If the assessment of the current wave of reforms is anything like the assessment of past efforts, we might expect a great deal of attention to be focused on various outcome measures. While a great many factors can influence such measures quite apart from the policy reforms themselves, one in particular might be predicted. We might expect that once the more challenging standards are in place, aggregate measures of student performance will rise. Practitioners and policy makers will, of course, be tempted to credit their reform efforts for the improvement. However, given our analysis of the potential impact of these reform efforts on likely dropouts, we would be more prone to credit the improvement to the greater selectivity of schools. For this reason we believe that aggregate measures of student performance should be based on a "full enrollment model" rather than on a "survivor model" as is typically done at present. Under this full enrollment model, aggregate performance measures would include scores for students who have dropped out of school. Scores for dropouts might be estimated

on the basis of their earlier test scores and background characteristics. In any case, the likely effect of such a model would be to reduce the aggregate scores by making them reflective of both excellence and equity concerns. In this way we might judge the true effects of the reform efforts. Only with a system that incorporates both excellence and equity concerns can we hope to stimulate an interest in devising means of delivering educational resources to students in need of them, and ultimately, only in this way can we preserve a system of public education committed to excellence.

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